UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
3628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 September 2010_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-11 and 15_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-11 and 15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-11 and 15 have been previously examined. Claims 1 and 15 have been

amended. No claims have been added or cancelled. Thus, claims 1-11 and 15 are

presented for examination.

Response to Arguments

Applicant's arguments filed 09/15/2010 have been fully considered but they are not

persuasive.

Applicant continues to argue that the references teach away from the claimed invention.

The Examiner disagrees. Applicant asserts teaching way while at the same time

admitting that the references do teach the cited claim language, but just not for the

same use as Applicant's invention-(Applicant's remarks, dated 09/15/2010 pg. 10 para.

5). While the Examiner disagrees with Applicant's assertion that Gale does not teach

the cited claim language, the recitation of a new intended use for an old product does

not make a claim to that old product patentable, *see In re Schreiber, 128 F.3d 1473, 44*

USPQ2d 1429 (Fed. Cir. 1997).

Hornick in view of Gale have been shown to teach every limitation of the recited

claim. Hornick teaches determining the expected revenue for a number of seats for a

given class of service between two locations. Hornick then selects another class of

service of another transport service and determines the number of locally available

seats for the class of service. Gale was then relied upon to teach the determination of

an overall number of available seats as a function of the locally available seats between

two transport services. Applicant's spurious argument that a user in the system of Gale would receive a "Sorry, no seat is available in compliance with your request..." message is not only absent from the text of Gale, it isn't supported by the disclosure of Gale .

Applicant attempts to overcome Gale and Hornick by adding that the overall number of locally available seats is an availability capacity when considering an availability request. This amendment is unclear for two reasons. The first being that there is never any preceding step of "considering an availability request for the given class of service". Secondly, there is no preceding "overall number of locally available seats avfjk'(Y)". Assuming that Applicant means the overall number of available seats XFAVfik(Y), the model of Gale plainly shows that the total capacity is a function of the aggregate capacities of the flight legs. Specifically, Gale teaches

> Two flights operate each day on a particular route. One departs at a time of high demand, the other at a time of low demand. There is a continuum of risk-neutral consumers who each demand one ticket, and the total measure of consumers is equal to 1. Between t = 0 and t = 1, a measure a (1,1) of consumers learn that they will prefer the "high-demand" flight. The remainder learn that they will prefer the "low- demand" flight. (We also refer to the flights as the "peak" and the "off-peak.") Since there is a continuum of consumers, there is no aggregate demand uncertainty. Each flight has capacity K, where 1.5 g K l infinity, Since K is less than infinity, there is not enough capacity to serve all consumers who prefer the high-demand flight. <u>However, total capacity is sufficient to serve all consumers</u>. We normalize marginal costs to zero and set fixed costs to zero as well (see Gale pg. 136 col. 2).

As demonstrated above, the system of Gale views the total capacity as an

aggregate of the two flights. Gale can then transfer passengers depending on

preference and availability, to the later of the two flights. This is much like

Applicant's system where while a total capacity is an aggregate of flights,

ultimately passengers are transferred to the second flight. Applicant's

specification describes

> First, a calculation is made, in the conventional fashion, of the local
> availability (AVk) of each class of service examined on each flight in the
> chain. For the class of service in question, the number of transferable
> reservation requests (SPFik(Y)) and the number of reservation requests
> that can be accepted (SAFik(Y)) are then determined. The number of
> transferable reservation requests can be defined as the number of
> reservation requests made on the given class of service k that exceeds
> the physical capacity of said class of service k and that can be transferred
> to other flights.

Contrary to Applicant's assertions, Gale and Applicant's specification provide

similar functionality with respect to aggregation of capacity and what is done

subsequent to capacity planning to accommodate customers. Accordingly,

Applicant's arguments are not persuasive and the rejections are maintained.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claims 1-2, 10 and 15 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

3.   Applicant's amended claims 1 and 15 recite the limitation, "using the overall

number of locally available seats avFi(Y) as an availability capacity when considering an

availability request for the given class of service (k) on the given transport service (Fi)

between said two locations" The limitation is unclear because there is no preceding step

of "considering an availability request for the given class of service".

4.   Claims 1 and 15 recite the limitation "the overall number of locally available seats

avfjk'(Y)" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-2, 10 and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hornick U.S. Patent No. 5,255,184 in view of Gale et al; hereinafter

"Gale".

7.   As per Claims 1 and 15, Hornick teaches determining at a predefined level of

expected revenue (Y), a number of seats locally available avrik(Y) for a given class of

service (k) on a given transport service (Fi) between said two locations (see Col. 6 lines

49-56);

selecting at least one other class of service (k') of another transport service (Fj) between

said two locations (see Col. 5 lines 2-11);

determining the number of locally available seats aVFjk,(Y) for the class of service (k')

of the another transport service (Fj) at the predefined level of expected revenue (Y) (see

Col. 6 lines 48-56 and Col. 5 lines 46-51); Hornick does not explicitly teach the limitation

taught by Gale

and determining for the given class of service (k) on the given transport service (fi),

an overall number of available seats XFAVFjk(Y) at the predefined level of expected

revenue (Y) as a function numbers of locally available seats (aVFik(Y), determined for

the given transport service and the at least another transport service between said two

locations

where the given transport service between said two locations is a journey consisting

only of a single leg (see pg. 136, Col. 2 lines 4-24 and pg. 139 Col. 1 lines 23-31). It

would have been prima facie obvious to one of ordinary skill in the art at the time of

invention to modify the method of Hornick to include the teachings of Gale to aggregate

capacity on parallel flights.

8.   As per Claim 2, Hornick teaches the method of claim 1 as described above. Gale

further teaches the overall number of available seats XFAVFik(Y) is determined by

adding up the numbers of seats available locally (avid(Y), avfjk(Y)) of the two classes of

service (k, k') determined for the given transportation service and the at least another

transport service between said two locations (see pg. 136, Col. 2 lines 4-24 and pg. 139

Col. 1 lines 23-31).

9.   As per Claim 10, Hornick teaches the method of claim 1 as described above.

Hornick further teaches the steps in the process are carried out each time there is an

availability request from a customer (see Col. 6 lines 1-20)

10.   Claims 3-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hornick in view of Gale et al., hereinafter "Gale" Reference U of the attached PTO-

892 in further view of Talluri U.S. Patent No. 6,263,315 B1.

11.   As per Claim 3, Hornick teaches the method of claim 1 as described above.

Hornick does not explicitly teach the method taught by Talluri

- to each class of service a boundary transfer value (SPmax) is assigned that

corresponds to the maximum number of reservation requests for the class of service

that can be transferred to seats on other classes of service (see Col. 2 lines 10-14);

- for each class of service, a number of transferable reservation requests (SP(Y)) is

determined that is equal to:

• either zero, if the number of seats available locally for said class of service (k) is

positive (see Col. 2 lines 10-14).

for each class of service, a number of reservation requests that can be accepted

(SA(Y) is determined that is equal to:

• or the number of seats available locally for said class of service avk(Y) if this number

is positive (see Col. 1 lines 65-67 and Col. 2 lines 1-27). It would have been prima facie

obvious to one of ordinary skill in the art at the time of invention to modify the method of

Hornick to include the teachings of Talluri to incorporate booking limitations, as taught

by Talluri Col. lines 10-15).

12.   As per Claim 4, Hornick in view of Gale teaches the method of claim 1 as described above. Hornick does not explicitly teach the limitation taught by Talluri to each class of service a boundary acceptance value (SAmax) is assigned that corresponds to the maximum number of seats in said class of service that can be used to transfer reservation requests on other classes of service; - an upper limit that is equal to the boundary acceptance value (SAmax) is assigned to the number of reservation requests that can be accepted (see Col. 2 lines 1-22 and Col. 3 lines 8-16). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the methods of Hornick and Gale to include the teachings of Talluri to allow a maximum available capacity for a demand class, as taught in Talluri Col. 3 lines 14-16.

13.   As per Claim 5, Hornick in view of Gale and Talluri teaches the method of claim 3 as described above. Hornick further teaches a single other class of service (k') that belongs to another transport service (Fj) is selected; - the total acceptance capacity (TSAk) from the other class of service (k') for the given class of service (k) is determined by selecting the minimum value from the boundary transfer value (SPFjkmax) of the given class of service (k) and the number of reservation requests that can be accepted (SAFjk'(Y)) on said other class of service (k') (see Col. 24 lines 41-60), the total transfer capacity (TSPk) on said other class of service (k') is determined on the given class of service (k) by selecting the minimum value from the number of transferable reservation requests for the other class of service (k') (SPFjk' (Y)) (see Col. 24 lines 41-60) and the number of reservation requests that can be accepted on the given class of service (k) (SAFik(Y)), the overall number of available seats XFAVFik(Y) is calculated by • adding

the number of seats available locally aVFik(Y) and the total acceptance capacity

TSAFik(Y) (see Col. 25 lines 11-22). The limitation, "and subtracting therefrom the total

transfer capacity TSPFik(Y)" is merely a statement of intended use and as such is

afforded little patentable weight.

14.   As per Claim 6, Hornick in view of Gale and Talluri teaches the method of clam 4

as described above. Hornick further teaches for each class of service (k) of a given

transport service (Fi), the classes of service (k') of the transport service are selected

that have a lower index to which the reservation requests on the class of service of the

given transport service (Fi) can be transferred (see Col. 12 lines 36-49). Hornick does

not explicitly teach the limitation taught by Talluri, an index i is assigned to each

transport service, whereby the value of said index increases with the time of departure,

(see Col. 6 lines 24-30, Examiner is interpreting the threshold value to have the

equivalent effect of an index based on a departure time). It would been prima facie

obvious to one of ordinary skill in the art at the time of invention to modify the method of

Hornick to include the teachings of Talluri to assign a weigh to a parameter lines 55-59.

The limitation, "a transport service chain (Fi) is formed that has successive departure

times and where each departure time has a selected class of service (k, k')" is merely a

statement of intended result and as such is afforded little patentable weight.

15.   As per Claim 7, Hornick in view of Gale and Talluri teaches the method of claim 6

as described above. Hornick further teaches the total acceptance capacity TSAFik(Y)

for the class of service (k) is determined by selecting the minimum value from the

boundary transfer value(SPFikmax) of the given class of service (k) and the sum of the

numbers of reservation requests that can be accepted (SAFjk,(Y)) for the classes of

service (k') of transport services (Fj) to which the given class of service (k) can be

transferred (see Col. 24 lines 41-60).

16.   As per Claim 8, Hornick in view of Gale and Talluri teaches the method of claim

7 as described above. Hornick further teaches the total transfer capacity TSPFik from all

of the other classes of service to a class of service (k) is determine from the update of

the number of reservation requests that can be accepted to said class of service (k)

(see Co. 24 lines 41-60 and Col. 5 lines 51-65).

17.   As per Claim 9, Hornick in view of Gale and Talluri teaches the method of claim

8 as described above. Hornick further teaches the overall number of available seats

XFAVFik(Y) is calculated by adding the number of seats available locally aVFik(Y) and

the total acceptance capacity TSAFik(Y) (see Col. 25 lines 11-22). The limitation, "and

subtracting therefrom the total transfer capacity TSPFik(Y)" is merely a statement of

intended use and as such is afforded little patentable weight.

18.   As per Claim 11, Hornick in view of Gale and Talluri teaches the method of claim

6 as described above. Hornick further teaches the total transfer capacity TSPFik from all

of the other classes of service to a class of service (k) is determine from the update of

the number of reservation requests that can be accepted to said class of service (k)

(see Col. 24 lines 41-60 and Col. 5 lines 51-65).

Conclusion

19.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to TONYA JOSEPH whose telephone number is (571)270-

1361. The examiner can normally be reached on Mon-Fri, 7:30 am-5:00pm First

Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Hayes can be reached on 571 272 0847. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHN W HAYES/
Supervisory Patent Examiner, Art Unit 3628